Earthquake Shaking — Green Alert

GSN · USAID FROM THE AMERICAN PEOPLE · ANSS

M 6.0, 15km WNW of El Hoyo, Argentina

PAGER
Version 4

Origin Time: 2019-12-24 16:43:32 UTC (Tue 13:43:32 local)
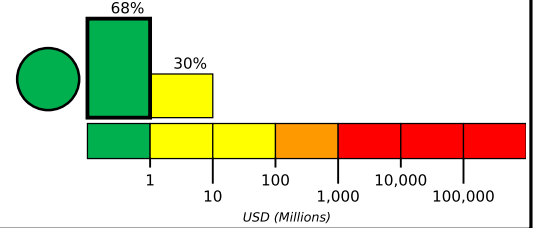Location: 26.9769° S 63.3728° W Depth: 560.6 km

Created: 1 day, 0 hours after earthquake

Estimated Fatalities

Green alert for shaking-related fatalities and economic losses. There is a low likelihood of casualties and damage.
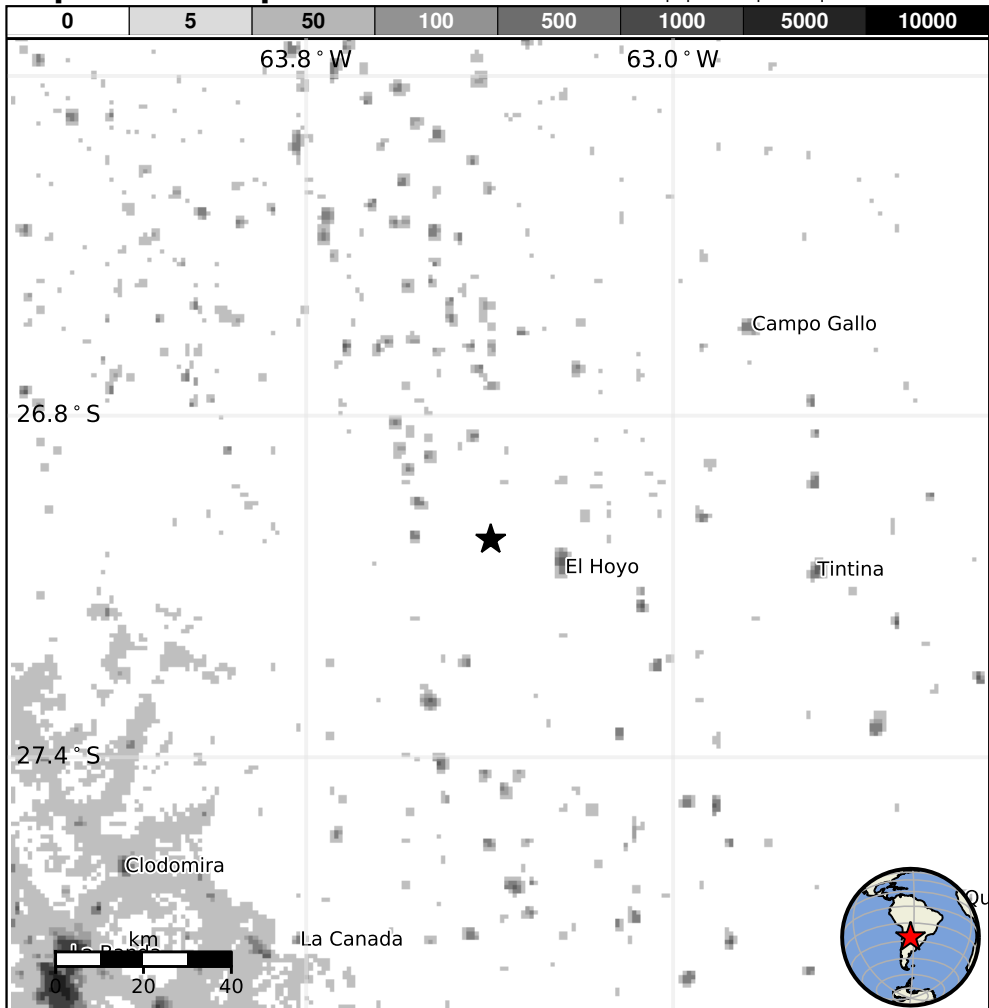
65%
30%
4%

1 10 100 1,000 10,000 100,000
Fatalities

Estimated Economic Losses

68%
30%

1 10 100 1,000 10,000 100,000
USD (Millions)

Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		–*	536k	0	0	0	0	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure

population per 1 sq. km from Landscan

0	5	50	100	500	1000	5000	10000

63.8° W   63.0° W

Campo Gallo

26.8° S

El Hoyo

Tintina

27.4° S

Clodomira

La Canada

0 20 40 km

Structures

Overall, the population in this region resides in structures that are vulnerable to earthquake shaking, though resistant structures exist. The predominant vulnerable building types are adobe block with concrete bond beam and unreinforced brick with concrete floor construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
2002-05-28	396	6.0	VI(9k)	0
1973-11-19	294	5.9	VII(9k)	–
2004-09-07	299	6.1	VIII(13k)	1

Recent earthquakes in this area have caused secondary hazards such as landslides that might have contributed to losses.

Selected City Exposure

from GeoNames.org

MMI	City	Population
II	**El Hoyo**	**2k**
II	**Tintina**	**4k**
II	Santiago del Estero	355k
II	Nueva Esperanza	<1k
II	**La Canada**	**<1k**
II	**La Banda**	**<1k**
II	Beltran	5k
II	**Quimili**	**11k**
II	**Clodomira**	**9k**
II	**Campo Gallo**	**5k**

bold cities appear on map.   (k = x1000)

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.
https://earthquake.usgs.gov/earthquakes/eventpage/us70006qk4#pager

Event ID: us70006qk4